

**THE TEXAS MEDICAL RANGERS IN THE MILITARY RESPONSE OF
THE UNIFORMED MEDICAL RESERVE CORPS
TO HURRICANE KATRINA AND HURRICANE RITA 2005:
THE NEW AND TESTED ROLE OF
THE MEDICAL RESERVE CORPS IN THE UNITED STATES**

Colonel James L. Greenstone, Ed.D., J.D., DABECI, TXSG

ABSTRACT

“The stormy waters of Louisiana crashed against the sturdy shores of Texas.” This quote from the Dallas Chief Medical Officer, Raymond Fowler, M.D., set the stage for what happened after Hurricane Katrina and Hurricane Rita in 2005, and for what follows here. Dr. Fowler went on to say that one-third of all those transported out of Louisiana were received by his service in North Texas. Treatment was given to more than 8,000 patients in the first two week period. There were no fatalities and no adverse outcomes. And the Texas Medical Rangers of the Texas State Guard, in North Texas, were an integral and pervasive part of making this happen. This previously untested uniformed medical reserve corps demonstrated its ability to deliver what it had promised: medical augmentation, reliability under extreme stress, practical attention to diverse and special populations, and military professionalism.

INTRODUCTION

The Texas State Guard was organized by Congressional passage of the state defense force statutes in 1940. The tradition of the Texas State Guard dates to the Republic of Texas in 1835. The Texas Medical Rangers have been established for only about three years. They were first organized within the Texas State Guard 10 March 2003 with the Headquarters in San Antonio, Texas. The northern area command was organized 27 March 2004. Texas Medical Rangers are a Uniformed Medical Reserve Corps developed much like their civilian counterparts. A major difference is the military structure and organization. Whereas civilian medical reserve corps are organized along county lines, the uniformed medical reserve corps is organized on a state-wide basis.

DEPLOYMENT

The Texas Medical Rangers were first called to State Active Duty and deployed throughout the State of Texas in the wake of Hurricane Katrina. They were again deployed shortly thereafter to respond to the effects of Hurricane Rita. This mandatory deployment of state military forces lasted for several weeks for each deployment.

TEXAS MEDICAL RANGERS, NORTH

The Rangers in the northern part of Texas augmented the emergency medical care operations at the Dallas Convention Center and the Dallas Reunion Arena, and established the Disaster Hospital site in Tyler, Texas. Heretofore an untested good idea, the Rangers provided on-site medical and support assistance to evacuees and patients presenting for help. They provided roving medical patrols on a 24-

Report Documentation Page				Form Approved OMB No. 0704-0188	
Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.					
1. REPORT DATE 2006		2. REPORT TYPE		3. DATES COVERED 00-00-2006 to 00-00-2006	
4. TITLE AND SUBTITLE The Texas Medical Rangers in the Military Response of The Uniformed Medical Reserve Corps To Hurricane Katrina and Hurricane Rita 2005: The New and Tested Role of The Medical Reserve Corps in the United States				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) State Defense Force Publication Center,19819 Maycrest Way,Germantown,MD,20876-6339				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited					
13. SUPPLEMENTARY NOTES See also ADA494466. Pub in: State Defense Force Monograph Series, Winter 2006, Medical Support Teams. © 2008 State Defense Forces Publications Center. Creative Commons Attribution License.					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT Same as Report (SAR)	18. NUMBER OF PAGES 13	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			

hour basis to assess and reassess evacuees who might need additional medical assistance. To their credit, several lives were saved by this procedure. They set up isolation areas to control disease and instituted a hand-sanitizing program throughout their area of responsibility that actually prevented an epidemic. They worked continually for the Chief Medical Officer on the sites.

During the aftermath of Hurricane Rita, Texas Medical Rangers established and administered a Disaster Hospital that provided for special needs patients evacuated from the South of Texas. An inspector from the Office of the Surgeon General of the United States said in her report that the hospital was a “best practices model.” It was organized along the specifications of a field military hospital and, in so doing, was able to administer in an effective manner to hundreds in serious need of help. The military organizational ability of the uniformed medical reserve allowed this to happen flawlessly. Structure to the overall organization was provided where chaos may have prevailed.

MEDICAL AND SUPPORT

The Rangers brought many medical and support specialties to the assigned sites. These professionals included:

- Physicians
- Nurses
- Physician Assistants
- Psychologists and other Mental Health Professionals
- Respiratory Therapists
- Emergency Medical Technicians
- Paramedics
- Infection and Disease Control Specialists
- Administration Specialists
- Logistics Personnel
- Operations Officers
- Command Staff Officers and Command Sergeants Major.
- Computer Operators
- Force Protection Personnel
- Laboratory Technicians

SIGNIFICANT QUOTATION

“Y’all’s efforts controlled an epidemic.” This quote from Dr. Fowler begins to spell out the value of the Texas Medical Rangers, Uniformed Medical Reserve Corps. An outbreak of dysentery was occurring when the Rangers arrived in Dallas. At the direction of the Chief Medical Officer, instituting a 100% hand-sanitizing program throughout the Dallas Convention Center and Dallas Reunion Area almost immediately brought an end to this potentially destructive outbreak. See Figure 1, below, for details.

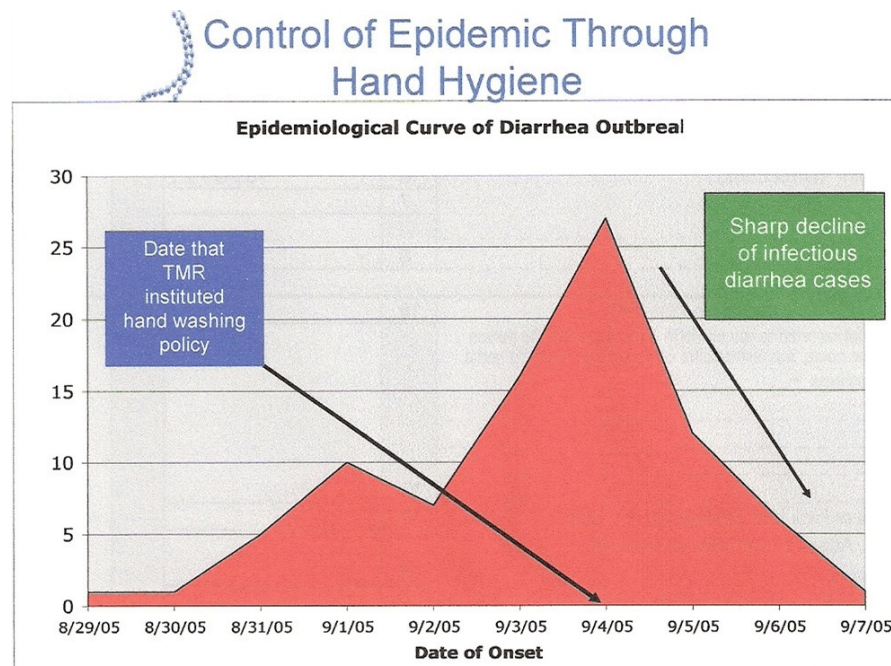


Figure 1: Results of Deployment of Hand-Sanitizing Program by Texas Military Rangers (TMRs) as Directed by the Chief Medical Officer.

THE NUMBERS

Numbers of evacuees assigned to the various sites worked by the Texas Medical Rangers at any one time were as follows:

- Reunion Arena. 7,649
- Dallas Convention Center 12, 659
- Tyler Disaster Hospital 800

See Figure 2, below, for details.

ILLNESSES AND CONDITIONS TREATED

Illnesses treated included:

- Wound care
- One Baby delivered
- Two Myocardial infarctions
- Diabetes
- Mental health problems
- Hypertension
- Diarrhea
- Heat injuries

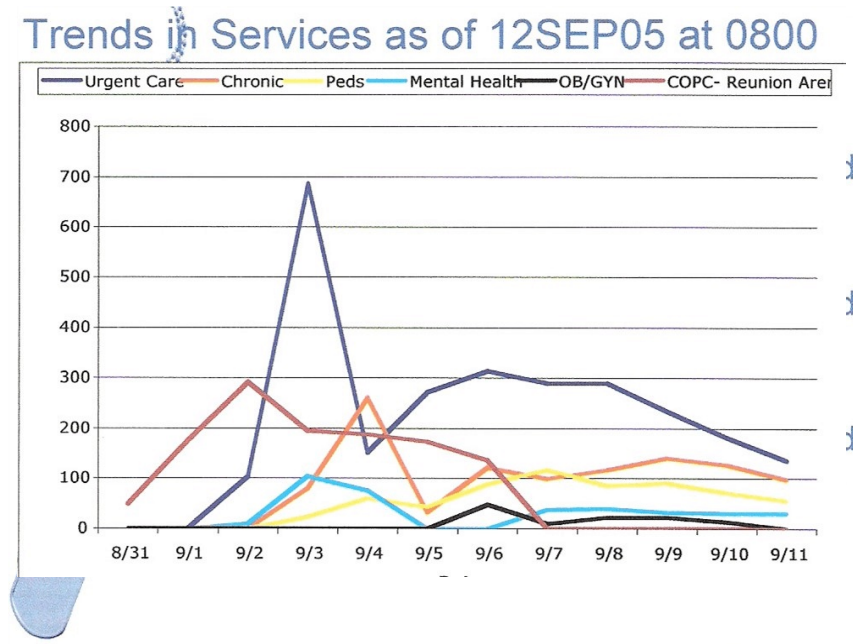


Figure 2: Evacuees as of a Particular Date During Operations Katrina

- Asthma
- Respiratory illnesses in children
- Isolation for dysentery and vomiting
- Viral meningitis
- Injuries due to off-site fighting
- Tuberculosis
- HIV
- Special medical needs.

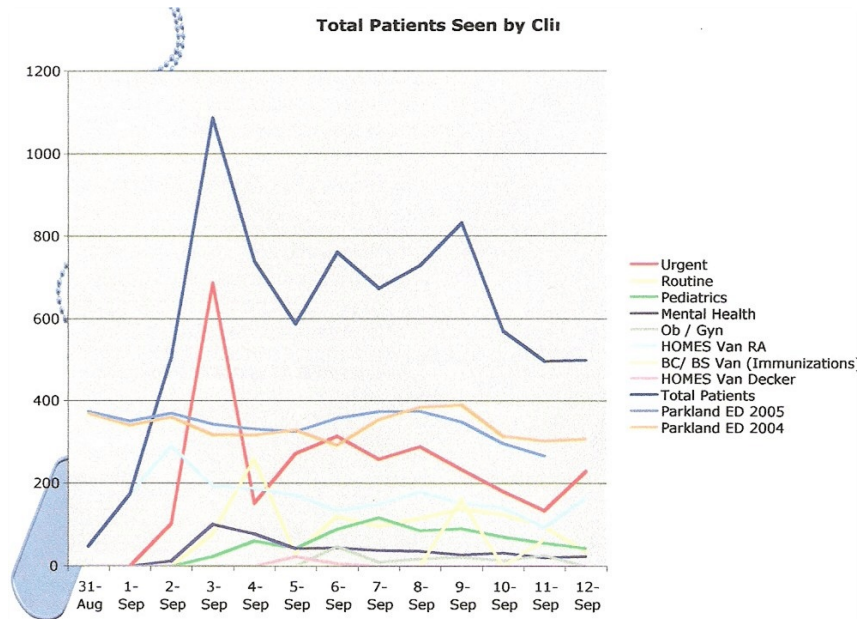
See Figures 3 and 4, below, for details.

QUOTATION

Dr. Fowler, the Chief Medical Officer in Dallas reported that, “The Urgent Care Clinic at Dallas Convention Center is seeing more patients in a 24-hour period than the Emergency Room at the county Parkland Hospital. Parkland sees 300 patients per day. The clinic at Dallas Convention Center is seeing 719 patients on average in a 24-hour period.”

During this increase of patients at the convention center, no increase occurred in the patients seen in the Parkland Emergency Room when compared to both 2004 and 2005 figures during the same time frame. The implication for the Medical Rangers is that they contributed to developing the surge capacity that was so urgently needed. See Figure 5, below, for details.

Figure 3:
Services



Trends in

Clinic Services 12SEP05 as of 0800

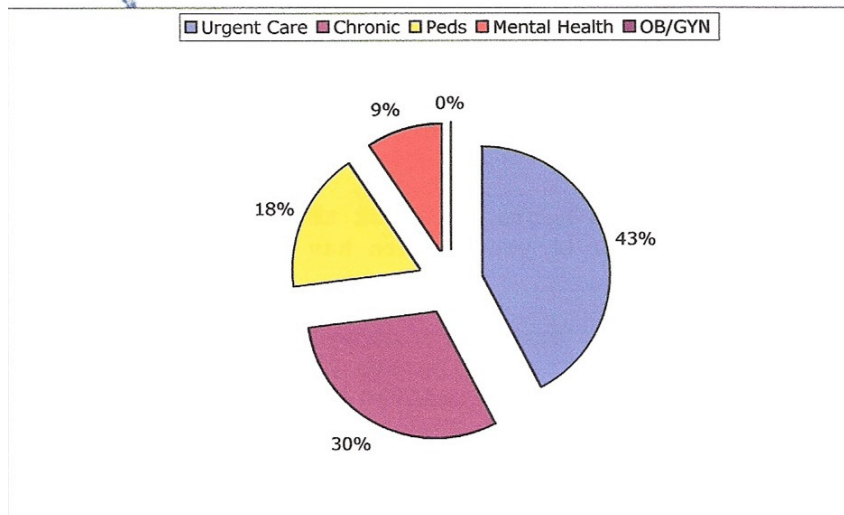


Figure 4: Clinic Services

STRENGTH

Texas Medical Ranger strength included:

- Medical in Dallas. 30
- Non-Medical in Dallas. 20
- Medical and Non-Medical in Tyler . . 23

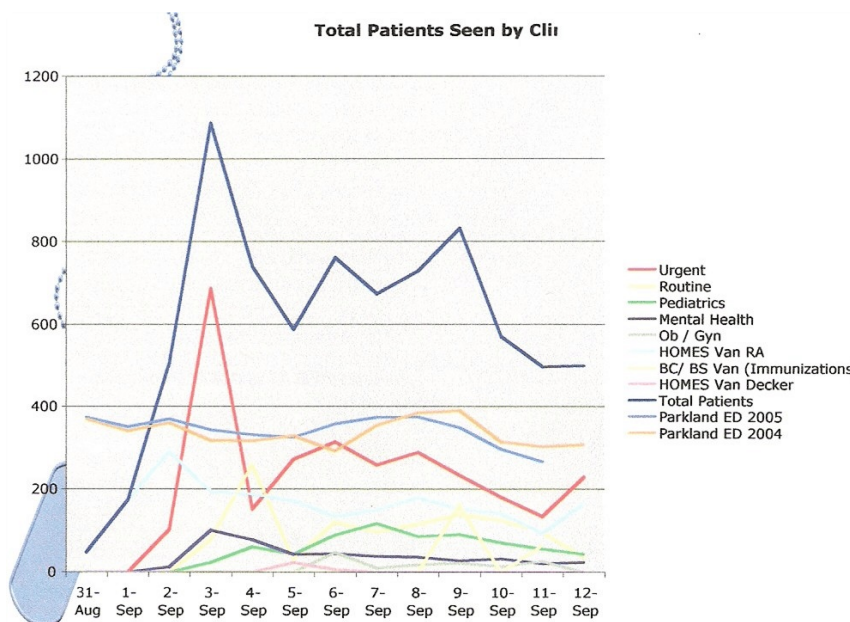


Figure 5: Surge Capacity

DUTIES

Daily duties included:

- Two Medic Team Roving Patrols (two soldiers each team)
- One Team Isolation Management (two soldiers)
- Laboratory assistance (one soldier)
- Administrative (nine soldiers)

Over 6000 man-hours were worked.

KEY EVENTS

Key events occurring during the several deployments included:

- Rangers worked with the Chief County Epidemiologist to effectively handle the diarrhea outbreak.
- Rangers were assigned by the Chief Medical Officer, and administered mandatory hand-sanitizing for all residents and workers.
- Roving teams of medics identified many patients with mental and physical needs that might have otherwise been overlooked.
- Unsanitary conditions in the feeding lines were corrected.

- Reorganized the dining procedures to make them more efficient.
- Designed and built an isolation and containment area to control a dysentery outbreak at the direction of the County Public Health Officers and the Chief Medical Officer.
- Worked with officials of the Centers for Disease Control.
- Recognized, treated and referred cases involving heat injuries to evacuees.
- Found and returned several lost children.
- Obtained help for evacuees identified with mental health issues.
- Reconnaissance of Reunion Arena residents for emergent medical problems.
- Assistance to evacuees in the Federal Emergency Management Agency (FEMA) lines.
- Evacuation of chest pain victim from FEMA assistance lines.
- Identification of several critical diabetic patients.
- Coordinated Tuberculosis control with Dallas County Health Department.
- Shelter management.
- Assisted individuals in obtaining identification cards.
- Developed a Psychological Force Protection program.
- Identified abandoned beds and public health problems.
- Provided assistance to special needs and nursing home patients.

DEPLOYMENT EVENTS

There were three main roles that were filled by the Texas Medical Rangers at the Dallas Convention Center and at Reunion Arena. These three functions included providing roving medic teams, assessing public health needs for, and participating in, infection control and staffing of the urgent care area.

Upon arrival at the convention center and after COL James L. Greenstone and CPT Mark Ottens had spoken with the Chief Medical Officer, roving medic teams were established throughout the convention center. These roving medic teams were found to be invaluable to the health and welfare of the population. They identified physical and mental health issues that would have undoubtedly gone unnoticed and led to less than desirable outcomes or even death. Some of the events that the medics discovered and cared for are as follows:

- All roving teams early on in the deployment immediately started noticing patients with extreme mental disturbances who had not received care. The teams were also able to assist people who had been sexually assaulted or witnessed terrible actions during their evacuation from Louisiana.
- The roving team of 1LT Richard Nessner and SGT Olivia Anderson identified a way to better route evacuees through the lunch line. This better organization allowed for the enforcement of proper hand hygiene to prevent disease proliferation.
- The roving team of TSGT Lisa Bureau and SPC Terry Smith found food vendors in the convention center who were passing out food without hand hygiene in place and with no use of gloves. They immediately corrected the issue, and averted a problem.
- When FEMA opened their registration line outside in the heat on a day with the heat index above 100 degrees, the roving team of 1LT Mike Hudson and MAJ William Kaschub were sent to watch for heat injuries. Four evacuees had to be sent to the hospital for care due to heat injuries. MAJ Steve Sanderfer and CPT Mark Ottens were notified of the problem and took Gatorade and cold water to the line and convinced FEMA to move it inside where it was cooler.
- The roving teams maintained surveillance of hand hygiene on the food line. On several occasions they professionally and immediately shut down the serving line when they found that hand hygiene principles were not in place. The lines were reopened when hand-sanitizing was established.
- TSGT Lisa Bureau and SPC Terry Smith attended an individual who, while in the FEMA line, started having chest pains. He was rapidly evacuated to a medical facility where emergency care could be delivered. It was later discovered that this gentleman had a heart attack.
- TSGT Bureau and SPC Smith on four separate occasions during the deployment identified patients who did not appear to be well. Upon further assessment these patients were found to have severely low blood sugar due to their poorly managed diabetes. Bureau and Smith are credited by the Chief Medical Officer for having saved the lives of these individuals.
- 2LT Harold Timboe and 1LT Richard Nessner noticed that evacuees were moving out of the convention center and had left their bedding behind. This was determined to be a public health hazard. A process for tagging and removing abandoned bedding and personal belongings was developed during a conference with the Chief Medical Officer. This process was then initiated by the medic teams to control a potential health hazard.
- As the population of the convention center dwindled and the population at Reunion Arena increased, roving teams were sent to Reunion Arena to be the only medical teams that were on the floor to assess the needs of the population. They did have Dallas Fire Department on the scene to utilize as needed for evacuation of patients.

PUBLIC HEALTH ISSUES

The public health needs of such a large number of people packed into a tight space were evident. The infection control aspect of dealing with the issues of having so many people fell to the medical personnel of the Texas Medical Rangers. An outbreak of infectious dysentery was well underway upon their arrival; however, with the implementation of hand hygiene and infection control procedures, this potentially disastrous epidemic was prevented. See Figure 1, above. The Chief Medical Officer, Dr. Fowler stated that, “The Texas Medical Rangers prevented an epidemic.”

- MAJ Carol Olivier and SGT DiAnna Jones upon their arrival began to work with Dr. John Carlo, Chief Epidemiologist with Dallas County Health and Human Services, to do surveillance on the source of the outbreak of dysentery. The CDC epidemiologists arrived and the Rangers were attached to them to continue the search for the source of the outbreak. It was determined early on that the source was most likely poor hand hygiene. A hand hygiene policy was placed into effect that required all persons entering and exiting any area of the convention center, food lines, and bathrooms to use alcohol based hand sanitizer. Within only a few days the epidemic was under control.
- MAJ Olivier and SGT Jones, upon recommendation from the CDC, designed, built, and organized both an isolation and containment area for both pediatric and adult patients to prevent the spread of infectious dysentery and vomiting. This proved to be a highly efficient and effective way to prevent spread of disease in those persons already affected.
- All of the Texas Medical Ranger staff maintained due diligence by monitoring and enforcing the hand hygiene policy throughout the deployment.
- As a public health recommendation, the Rangers identified trash and abandoned bedding that needed to be removed. They assisted in educating the population and in removing these items as necessary.
- Rangers provided the primary force for staffing of the adult and pediatric isolation area. Most of the civilian volunteers were not willing to go into this area. Texas Medical Ranger nurses, Emergency Medical Technicians, Paramedics, and doctors staffed this area 24 hours a day until its closure. Texas Medical Ranger staff was asked to maintain public health surveillance of Reunion Arena. This was done by sending teams of infection control specialists to that location to report back to the Chief Medical Officer with their findings.

URGENT CARE

The urgent care area at the Convention Center was a highly functional area that saw patients 24 hours a day and 7 days a week. They averaged 719 patients a day and by the end of the deployment had seen more than 8000 patients. More than 300 patients were evacuated to the hospital. They helped to maintain the health of the population, and, as a result, there were no deaths or severe adverse events at the convention center. The Texas Medical Rangers augmented the civilian volunteer staff in this area.

- Rangers provided the only Medical Technicians to staff the lab during the entire operation. They maintained the staffing in this area 24 hours a day until the clinic closed.
- Nurses and Paramedics triaged patients continually.
- There were Nurses, Paramedics, Physician's Assistants, and Physicians on duty in the Urgent Care from the Texas Medical Rangers to augment the civilian staff for virtually 24 hours of every day. For the last week of the deployment, after nearly all of the civilian volunteers left, Rangers provided the main force for staffing of this area.
- Texas Medical Rangers found and treated, along with the civilian volunteer doctors, an infant that was suffering from infectious dysentery. This case was so severe that, according to the Chief Medical Officer, the infant was near death. Through quick treatment and fluid resuscitation this infant was saved.

DIGNITARIES

Several dignitaries visited Dallas Convention Center to witness the efforts, among others, of the Texas Medical Rangers. These included:

- U.S. Surgeon General Richard Carmona
- Mayor Laura Miller - Dallas
- Mayor Ray Nagin – New Orleans
- Kathleen Blanco – Governor of Louisiana
- Kay Bailey Hutchison – U.S. Senator
- Pete Sessions – U.S. Congressman
- Michael Levitt – Director of U.S. Department Health and Human Services
- MG Jerry Ragsdale – Commander, Texas Air National Guard
- MG Richard Box – Commander, Texas State Guard. See Figure 6, below, for his personal commendation.
- MG Charles Rodriguez – Texas Adjutant General.
- COL Cruz Medina – Task Force Commander, Texas Army National Guard
- COL Raymond Peters – Chief of Staff, Texas State Guard
- CSM Robert Smith – Command Sergeant Major, Texas State Guard

OPERATIONS

The Texas Medical Rangers at Dallas Convention Center, Dallas Reunion Arena and Tyler, Texas functioned in a highly organized manner. Shifts were staffed from 0800-2000 and 2000-0800 daily. There was an Officer-in-Charge and a Noncommissioned Officer-in-Charge for each shift. BG Scantlin, the North Texas Area Commander and the Deputy Commanding General of the Texas Medical Rangers held a daily briefing for commanders and staff, and to address concerns of the previous day. Also, there was a daily meeting conducted for the Texas Medical Ranger's Command Staff with the Chief Medical Officer, Dr. Ray Fowler. This was done in order to stay abreast of medical concerns and events related to the treatment and housing of evacuees. A formation of Ranger personnel was held prior to each shift to inform every one of events and of the mission. This allowed the troops to be informed of conditions as they changed shifts, and to give specific assignments.



Figure 6: Commanding General, Texas State Guard, About the Texas Medical Rangers, North

In addition to the other assignments, CPT Robert Rainey served as the Psychological Force Protection / Protective Medicine Officer for the Texas Medical Rangers. As troops became overwhelmed with the burden of caring for thousands of evacuees who had lost everything, CPT Rainey maintained contact with them to assist as needed. As a result, morale and psychological injuries were minimal. CPT Leopold Celiz served as Physical Force Protection Officer-in-Charge to make sure that the belongings of personnel were protected at all times.

Command Staff Texas Medical Rangers

The Command Staff of the Texas Medical Rangers deployed in the North was composed of the following:

- BG Marshall H. Scantlin – NORTEX Area Task Force Commander. See Figure 7, below, for a picture of BG Scantlin and COL Greenstone
- COL James L. Greenstone – Deputy Area Commander – Medical
- LTC Paul Moore – Executive Officer of the Dallas / Fort Worth Medical Response Group and Special Liaison to the Chief Medical Officer.
- MAJ Steve Sanderfer – Executive Officer
- CPT Mark Ottens – Operations Officer
- CPT Robert Rainey – Logistics Officer



Figure 7: BG Marshall Scantlin, Commanding General, Texas Medical Rangers (*right*) and COL James Greenstone, Texas Medical Rangers (*left*).

- CPT Phil Vaughn – Personnel Officer
- CSM Bill Schaaf – Area Command Sergeant Major
- CSM Cecil Rickman – Deputy Area Command Sergeant Major – Medical

OBSERVATIONS

There were several observations made to improve future deployments of the Texas Medical Rangers:

- Deployment packets must be ready at all times.
- Early meetings should be established with the Chief Medical Officer.
- Medical Supplies should be available to augment medic supplies.
- Communications must be established early. It must be maintained with appropriate and sturdy communications equipment.
- Texas Medical Ranger staff should be in place and ready to assist early on with the psychological effects of deployment.
- For long deployments, laundry and billeting must be arranged in advance.
- Office supplies (paper, pens, pencils, computers, printers, projector, and fax machine) should be maintained on a stand-by basis to take care of required forms and reports.

- Water tight boxes need to be obtained to pack deployment gear for easy access and transportation.

There have been many historical moments for the Texas Medical Rangers, Medical Reserve Corps, since it was first deployed for Hurricanes Katrina and for Rita. Another major history-making event occurred in Tyler, Texas. A representative of the United States Public Health Service, from Surgeon General Richard H. Carmona's office, visited the Tyler shelter. She told LTC (Dr.) Luis Fernandez, Tyler Medical Response Group Commanding Officer, and the Disaster Hospital Commander, that this was not a “shelter” or even a “special needs shelter.” It was truly a Disaster Hospital organized and run on the military medical scale and was a “best of practice model.”

The Texas Medical Rangers was an untested good idea prior to Katrina. The TMR has now been tested, with veterans who can augment a major disaster medical system. It is also capable of staffing and running a full-blown disaster hospital. What has been accomplished may well serve as the model for such disaster responses, at least according to the words of Dr. Carmona's representative. As a uniformed MRC, we have a lot of which to be very proud. The Texas Medical Rangers will always go where it is needed and will do whatever is necessary to accomplish the mission.¹

REFERENCES AND SOURCES

After Action Report, (September, 2005). Prepared for the headquarters, Texas medical rangers, San Antonio, Texas.

Briefing Reports, (September, 2005). Prepared for daily briefings during deployment, Dallas, Texas.

Cullen Inspection Report (September, 2005). United States Surgeon General's Office, United States Public Health Service, Washington, D.C.

Daily Briefings (September, 2005). Chief Medical Officer, Raymond Fowler, M.D.

Dr. Raymond Fowler, M.D., (September, 2005). Several quotations.

Track of Hurricane Rita (September, 2005). National Hurricane Center, the National Oceanic and Atmospheric Administration, and the National Weather Center, Washington, D.C.

¹ COL James L. Greenstone invites comments and/or discussion at drjlg1@charter.net or 817-882-9415 .